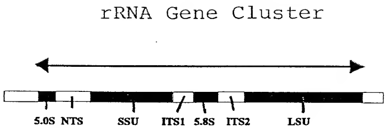


FIG. 1

1 50
AAAGTCGCAC CTTTCCCCAT AAACCCCCTC CCCACCCCCT TGGACATTGT
51 100
TCCACTTTTC ACTTGTATTG TGAAGCACCC AATGCTAGCC CATAGAACAG
101 150
TCCAGTAGTT CAATAGAGAG ACTAGTGAAC ATAGTTTATA ACATTGTCCA
151 200
AGGGGTGGAG GGGGATGCGC GAAATCGATG TGCACGTTTG GTCAAAGATG
201 250
CTCGCGAAAG CTGCACATCA ATTTCGCACA TGGGCGAAAT TGACTTGCAG
251 300
GTGGGTATAA AAGTTGATGT AGGCCATGTG GCTCGATTTC AACCATATGG
301 350
GTATGCTTCT GAGGATGGGG TGTTACAGTG GACCATATGA GGTAGGTCAT
351 400
TTGGAGATGT CACCAAAATG GTCTAAATCT GCGCATTCCA TTTAAGTGAA
401 450
TTTAAGTGAA ATTTAAGTGA ATTTTACTTA AAATTGACCT TTTTCGTTGC
451 500
GCAGATTTGG GGTGGTGATG GGTGACGCGG CGAATTTTTT AAAAAAGAGG
500 550
TATATCGCGT GCTATTTGTA TTTTTGGTAT CACCGCGTCA CCAATCACCA
551 600
TTGACGGTTT CTTTTTCGAA GTTTTTCCGG ATTATTGCAT TTTTTATATA
600 650
ATTGTGGGTG GCTGATTCTT GCGAAAGGAC TGTTGTGATG TCCGAGTTCC
651 700
CAAATTGGGA GTTTTTGGAC ATCACTCCTG ATCTGCCGGC GGCGATCAGG
700 750
ATGACTGACA TTTCGATATA TTTTGGGTAT TCGATAGCTG CCAAATCGGT
751 800
CAGCGTCGAG TATTCCGGTT TATTCGAAGG ATTCATGATA TTGCAAAATA
800 850
TCATTGATTT TCATGGGGTT TTGTATTAGT ACCCGCTCAT TGTGGGAAAG
851 900
TCGGGTGGAT TTATCTTACC CGCAAATCTA ATACAAGATT TGCATGATGC
900 950
AGCAATAGAC CAAGGTTAGT ATAGCAGTTG TATTTATACG ACTAGTTATG
951 1000
CAAACCCTTT GTGTTTTTTG TTGCGACTCT TGGCGTGAAC CGGAAGACCG
1000 1050
GACCTCGCTT TCGACTATTC ATCTTTGATG GATATGAGAT CGCAAGGGTA
1051 1100
TCGCTTCGTG CGATATTTAG TGACCATCAG AGCACGCTAC GACTTTTGAT
1100 1150
TATATCCTTG GATTTAATCG GAAGCTCGCA AGCATTGCAT TGATGCAATC

FIG. 2

ttttcaTTTT TGCTTTCACA ACCCCGCACC CCATGTACAA TGTTGCCAAC
#1
CACTAGAGTT TCAACAACAT TCGGATTTGA CAACATGTCA ACAATTCACA
#51
ACAGAAATTG ACAACATTGT CACAAATTCT CAAATTGGAC AACATTGGAC
#101
AAAAATTCAC AACATACATT GGACAACAGT GGACAACGAA CCCAAACCCG
#151
ACAACATTGT CCAGGGGGAT AGGGGGTGAA AAAGCAGTGC CGGCAAAGTC
#201
GAAAGATGTC AAGTTGGAAT GCGGCTCAAA TTCGTCATTT GTGTAAATCC
#251
GCAATTTTGC CAATGTGCAA TTTTGCAAAT GTGCAATTTT GCAAATGTGC
#301
AATTTTGCCA ATGTGCAATT TTGCAAATGC GCAATTTTGC AAATCCGCAA
#351
TTTTGCAAAT GTGCAATTTT GGAAAATCAC CAAATGAAAA TCGTCCAAGT
#401
CGAATTGGAG GCGTGGTGAC ATGGTCCCGG GATCCCCTGG TTACAGTGGA
#451
CAATATCCCA GCAATATTCG CTGTAATTTG GAGTTTCGCT GTTTTGGCAA
#501
ATTTTGAGTC TGAAAAAAAA AATTGCAAAT GCGCAAAGGG GGTGAAGGAA
#551
AAAAAAGCAC CCCCGAAGGT AAAATTCCCT TTAAGTCCCT TGCGCATTTG
#601
CAAAATTTTC AAAAATTGTT GCAAATGCGC TTTTGTTATT TGGCCGGTTC
#651
ATTGGTGTCA AAAGTTGCCT GGGGTGGTTA CACAATGCAC GGAATTGGTT
#701
GGAAGTTGTG TGATTGAAAA TTGGTCGTGT CACACAATTT TGCGCATTTG
#751
CAAAAATTCG CAAATTGGAC AAAAAAGGGT CGCGCACAGT CAAATTGCGC
#801
AAATTTCACT TTGAAGTGAG TGCGCATTTG TGGGGCAGAA ATGTGGTGAC
#851
AGCATCGTTT TTTATAATAA ATATTCTATA TTTAGTATCT TTATTATAAT
#901
TTGCTGTCAC CAATCACCAT TTTAGAATTT TTATTTTTTT ATGTTTTAGT
#951
GACCGCGGGA TTTTTTGCAA AGTACTATYG TGATGTTTGA GTTGTTTGAA
#1001
ATGGGCAATT TAGAACATCA TCAGAAATCG CTGAATAGTG ATTTTTGAGT
#1051
TTGACTGTTT GAAGTGTTTT GGGTATTCGG CAGCTGCCAA ATCGGTCAGC
#1101
GTCGAATATA ATAGCATTTT TGTGTGTATA TGATATTTAG CGATATCATT
#1151
GGAATCATGG GGTTTTGTAT TAGTACCCGC TCATTGTGGG AATGTCGGGT
#1201
GGTTCAATAT CACCTGCAAA TTTAATACAG GATTTGCATG ATGCAGCGAC
#1251
TGACCGGGGT TGGTATAATA GCTGATTATT CGGCTTATTA TGCAGACCTA
#1301
TCGTGTTAGT AGTTGCGACT CTTGGCGTGA ACCGGAAGAC CGGAACTTGA
#1351
ATTCGACTAT TTACGTCCGT AAACAGGAGA TTTCAAGAAT ATTGCACATT
#1401
TTGCGTGATA TAAACGTGAT CATCTGAGCA CGCTTCGACT CTTGGATATC
#1451
TGCTAATCAG CCGTCATCTG AGAGCTCGCA AGCATTGCAA TTGATGCAAT
#1501

FIG. 3

1 50
CGTGCCCTTT TCACGAATTC ACAGCCCCGC ACCCCATGTA CAATGTTGCC
51 100
CACCCGAAAT GCCTGCCTGC CCACCCGAAA TGCCCGAAAT GCCCGTTAGA
101 150
AAAAGTATGC GAAAAGTTCT TGTCAATTTT GACAGTGTGT GAAAAAACTG
151 200
AAAAAGTCCA CTCAACATTG CATTATGCAA TTTGCCACTC AACATTGTCC
201 250
AGGGGGATAG GGGGTGAAAA AGTATCGCAG TCCAACTGAA AAGATGCTAA
251 300
GTTGAAATGC GGCGCAAATT CATCACTTGA GTTGCGAAAA TCCCTAAAGT
301 350
CGAATTTGGC ACTCGGTGAC ATGATCGGGA ATTTCCCTGG TTACAGTGGT
351 400
CAAATCCCAG CAATTTTGGC AAAGTTTTTG AGTTTCGCAC TTTTCGCAAA
401 450
TTTCGTGTCT GAAAAAAAAA TTTCAACTTT GCGCAAAGGG GTCAAAGGGA
451 500
AAAAAAGCAC CCTCAAAAGG AAATTTCCCT TTAATCCCCT TTGAAAAAAA
500 550
TGCGCAAAGT TAAATTTGCG AAAATTTCGA TTTTCTCATA TGACCGATTA
551 600
GTTGGTGCCA GATGGTAGTC GGGATGGTTA CACGGTGCAC GGAACTCGTT
600 650
GGAAGTTCTG GAGTTACGAA TTGGTCCCGT CACCACAATT TGCGCATTTT
651 700
TGAAATTGCG CAAATTTGCG AAAAAAGCAG CGCGCAAAGT TAAATTGTGC
700 750
GAAAATTGAC TTTCAGGTCG GTGCGCAAAT TTGGGGTGAA AAAGTGGTGA
751 800
CAGCATCAGA ATTATAATAA ATAATCTATA ATCTAGTTCT TTTATTATAA
800 850
TTAGCTGTCA CCAATCACCA TTTGAGATTT TTTATTTTTT TATGTTTTAG
851 900
TGACCGCGGT ATTTTTTCCA GAGTACTATC GTGATGTCTG AGTTGTCTAA
900 950
AACGGCAATT TCAGAACATT ACCAGAAAAC ACTGAATAGT GGTTTCTGAG
951 1000
TCTGACTGTT TGAAGTGTTT TGGGTATTCG GCAGCTGCCA ATTCGGTCAG
1000 1050
GGTTGAATAT ACTAACATTT CTGTGTGTAT ATGGTATTTA GCGATATCAT
1051 1100
TGGAATCATG GGGTTTTGTA TTAGTACCCG CTCATTGTGG GAAAGTCGGG
1100 1150
TGGTTCAATA TCACCTGCAA ATTTAATACA GGATTTGCAT GATGCAGCGA
1151 1200
CTGACCGGGG TTAGTATAAT AGCTGATTAT TCGGCTTATT ATGCAGACCT
1200 1250
ATCGTGTTAG TAGTTGCGAC TCTTGGCGTG AACCGGAAGA CCGGAACTTG
1251 1300
ATTTCGACTA TTTACGTCCG TAACACGTCC GTAAACAGGA GATTTCAAGA
1300 1350
ATATTGCACA TTTTGTGTGA TATAATCGTG ATCATCTGAG CACGCTTCGA
1351 1400
CTCTTGAATA TTTGTTAAAC AACCGATATT CGGGAGCTCG CAAGCATTGC
1400 1450
AATTGATGCA ATC

FIG. 4

Primer	Sequence	Target
300 F	5'-CACTTGTATTGTGAAGCACCC-3'	*Perkinsus marinus*
300 R	5'-TTG GTG ACA TCT CCA AAT GAC-3'	
500 F	5'-ATGCTAGCCCATAGAACAGT-3'	
500 R	5'-ATGCTAGCCCACATCACAGC-3'	
NTS7	5'-AAGTCGAATTGGAGGCGTGGTGAC-3'	*Perkinsus* andrewsi
NTS6	5'-ATTGTGTAACCACCCCAGGC-3'	
PM5	5'-ATGCTAGCCC ATAGAACAGT-3'	*P. marinus* type I
PM7	5'-CAT CTC CAA ATG ACC TAC CT-3'	*P. marinus* type I
PM6	5'-ATGCTAGCCC ACATCACAGC-3'	*P. marinus* type II
PM8	5"-CAT CTC CAA ATG ACC TAC CA-3'	*P. marinus* type II

FIG. 5

FIG. 6

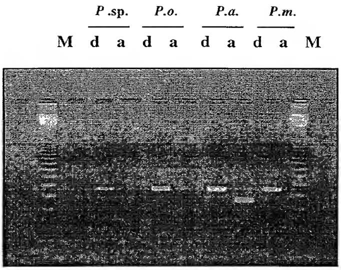


FIG. 7

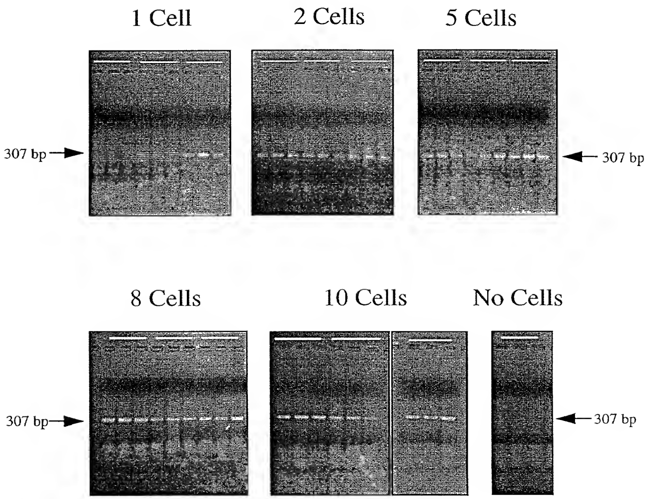

1 Cell
2 Cells
5 Cells
307 bp
307 bp
8 Cells
10 Cells
No Cells
307 bp
307 bp

FIG. 8

Samples

1 2 3 4

M a b a b a b a b M

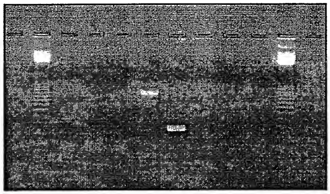


FIG. 9

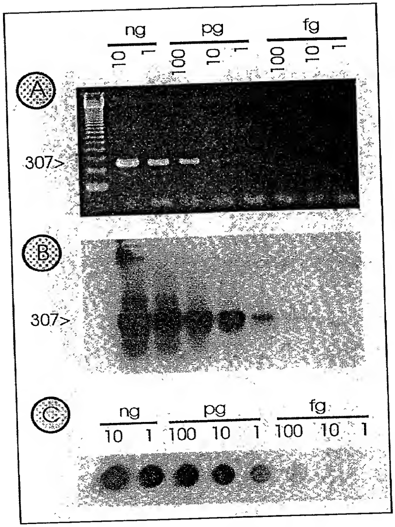

ng
10
1
pg
100
10
1
fg
100
10
1
A
307>
B
307>
C
ng
10
1
pg
100
10
1
fg
100
10
1

FIG. 10

	1				50
Type-I	CACTTGTATT	GTGAAGCACC	CAATGCTAGC	CCA**TAGA**ACA	G**T**CCAGTAGT
Type-II	CACTTGTATT	GTGAAGCACC	CAATGCTAGC	CCA**CATC**ACA	G**C**CCAGTAGT
	51				100
Type-I	TCAATAGAGA	GAC**T**AGTGAA	CATAGTTTAT	AACATTGTCC	AAGGGGTGGA
Type-II	TCAATAGAGA	GAC**G**AGTGAA	CATAGTTTAT	AACATTGTCC	AAGGGGTGGA
	101				150
Type-I	GGGGGATGCG	CGAAATCGAT	GTGCACGTTT	GGTCAAAGAT	GCTCGCGAAA
Type-II	GGGGGATGCG	CGAAATCGAT	GTGCACGTTT	GGTCAAAGAT	GCTCGCGAAA
	151				200
Type-I	GCTGCACATC	AATTTCGCAC	ATGGGCGAAA	TTGACTTGCA	GGTGGGTATA
Type-II	GCTGCACATC	AATTTCGCAC	ATGGGCGAAA	TTGACTTGCA	GGTGGGTATA
	201				250
Type-I	AAAGTTGATG	TAGGCCATGT	GGCTCGATTT	CAACCATATG	GGTATGCTTC
Type-II	AAAGTTGATG	TAGGCCATGT	GGCTCGATTT	CAACCATATG	GGTATGCTTC
	251				300
Type-I	TGAGGATGGG	GTGTTACAGT	GGACCATATG	**A**GGTAGGTCA	TTTGGAGATG
Type-II	TGAGGATGGG	GTGTTACAGT	GGACCATATG	**T**GGTAGGTCA	TTTGGAGATG
	301				
Type-I	TCACCAA				
Type-II	TCACCAA				

FIG. 11

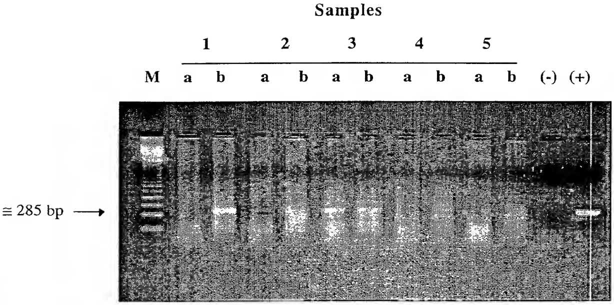

Samples
1
2
3
4
5
M
a
b
a
b
a
b
a
b
a
b
(-)
(+)
≅ 285 bp

FIG. 12

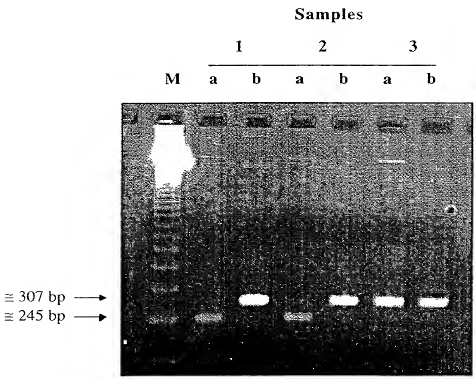
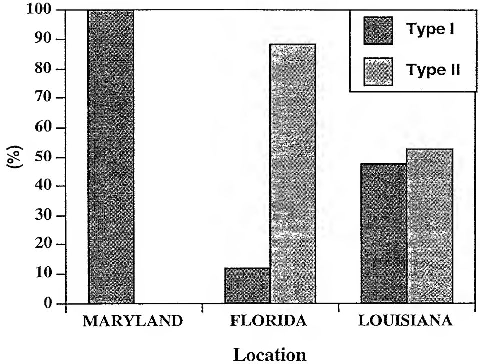
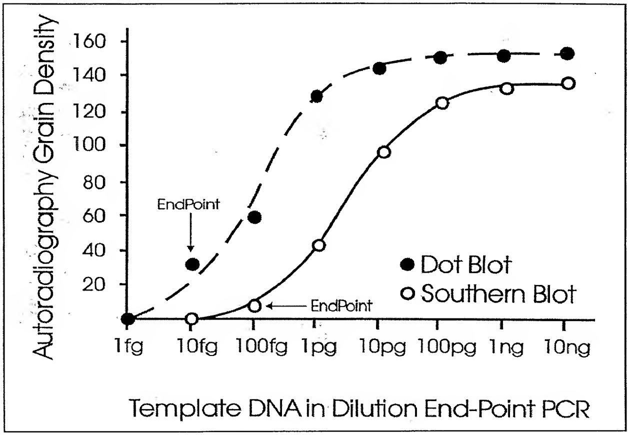

Samples
1
2
3
M
a
b
a
b
a
b
≅ 307 bp
≅ 245 bp

FIG. 13



100
90
80
70
60
50
40
30
20
10
0
(%)
Type I
Type II
MARYLAND
FLORIDA
LOUISIANA
Location

FIG. 14

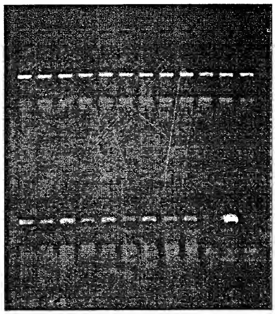


Autoradiography Grain Density
160
140
120
100
80
60
40
20
EndPoint
EndPoint
Dot Blot
Southern Blot
1fg
10fg
100fg
1pg
10pg
100pg
1ng
10ng
Template DNA in Dilution End-Point PCR

FIG. 15

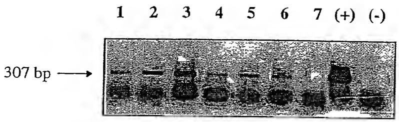
Samples

1 2 3 4 5 6 7 8 9 10 11 12



13 14 15 16 17 18 19 20 1 - + -

FIG. 16



```
                 .TCTTTTTAAA TCGCACTCAT GGCTTGTGCA TGCGTGCAAG CCCCCGGAGC
#1                ..................................................

>P. atlanticus.CCCCTGGACA ATGTTATCCC AGCTCAACAA CGAGCAACAG TGCTATGGCA
#51               ..................................................

>P. atlanticus.AGTAGTCCAC TAGAGAGCCA AGTCGACAAT CTCTACAACA TTGTCCAAGG
#101              ..................................................

>P. atlanticus.GGGAAAGGGG GGCGCGCGAA GTTGACCTGC AGCAGAGGGA AAAGATGCTG
#151              ..................................................

>P. atlanticus.AGTTTTGCTG CACCCCAACT TTGCGCACTT GGCGAAGTTG ACTTGCAGGC
#201              ..................................................

>P. atlanticus.GAGGGTAAAA GATGCTATGG TTGGTTGCGG ACCAAGTTCG CCGTGTGGGT
>PA690F-Text                 ATGCTATGG TTGGTTGCGG ACC
#251              ..................................................

>P. atlanticus.CATCATTATC GAGGTCTGTG GTGACGATGG ACTAGTTTTT AGGGATTTTC
#301              ..................................................

>P. atlanticus.CGGAGGTGTC ACCACGGACC CCCCAACTTT GCGCACGGGG GGTACTCAAT
#351              ..................................................

>P. atlanticus.TTTAAGTGAA ATTTAAGTAA AATTTACTTA AAATTCACGT TTTTGGGTGC
#401              ..................................................

>P. atlanticus.GCAAAGTTGA GGTGGTGACT GGTGACACGA AAATTTTAAA AAAGAGAGAT
#451              ..................................................

>P. atlanticus.ATTAAAAAAA TATTTATATT TTCTGTGTCA CCGTGTCACC AGTCACCACA
#501              ..................................................

>P. atlanticus.GGGCGTAATT TTCCGGGAAA TTTTCAGATT TTCCGGAAAA ATTGCATTTT
#551              ..................................................

>P. atlanticus.GGGGTAAATA GTGTCCGTCA GAATTTTGCC AAAGGACTGT CGTGATGTCC
#601              ..................................................

>P. atlanticus.GAGTTCCCAA ATTGAGGGTT TTTGGACATC GCTCTGAAAT CGCTAACGGC
#651              ..................................................

>P. atlanticus.GTTTCAGATT TCCGACTTTT CGACATATTC TGGGTATTTG ATAGCTGCCA
#701              ..................................................

>P. atlanticus.AATCGGTCAG CGTCGAATAT TCCAATATTT CGAAGGATAT ATGATATCGC
#751              ..................................................

>P. atlanticus.GAGATATCAT TGGATTTCAT GGGGTTTTGT ATTAGTACCC GCTCATTGTG
>PER1-Text                                          TAGTACCC GCTCATTGTG
#801              ..................................................

>P. atlanticus.GGAAAGTCGG GTGAATTTAT TCAACCCGCA AATCTAATAC AAGATTTGCA
>PER1-Text     G
#851              ..................................................

>P. atlanticus.TGATGCAGCG ACTGACCGGG GTGAGTGTAG CAGCTGTTCT ACGGCTTGCT
<PA690R-Text                                        GCTGTTCT ACGGCTTGCT
#901              ..................................................

>P. atlanticus.ACGCAGACCT ATCGTGTTAG TAGTTGCGAC TCTTGGCGTG AACCGGAAGA
<PA690R-Text   AC
#951              ..................................................

>P. atlanticus.CCGGACCTCG CTTTCGACTA TTCATTCCGA TGAATATGAG ATTGCAAGGG
#1001             ..................................................

>P. atlanticus.TATCGCTTCG TGCGATATTT AGTGATCATC AGAGCACGCT ACGACTTCAG
#1051             ..................................................

>P. atlanticus.TATATCCTCG GATACACAGA AGCTCGCAAG CATTGCATGA TGCAATC
<PER2-Text                           AGCTCGCAAG CATTGCA
#1101             ..................................................
```

FIG. 17

```
>P. andrewsi-S.ACCTGGTTGA TCCTGCCAGT AGTCATATGC TTGTCTCAAA GATTAAGCCA
 #1            ..................................................

>P. andrewsi-S.TGCATGTCTA AGTATAAGCT TTAAACGGCG AAACTGCGAA TGGCTCATTA
 #51           ..................................................

>P. andrewsi-S.AAACAGTTAT AGTTTATTTG GTGATCGATT ACTATTTGGA TAACCGTAGT
 #101          ..................................................

>P. andrewsi-S.AATTCTAGAG CTAATACATG CGTCAAGGCC CGACTTCGGA AGGGCTGCGT
 #151          ..................................................

>P. andrewsi-S.TTATTAGATA CAGAACCAAC CTAGCTCCGC CTAGTCCTTG TTGGTGATTC
 #201          ..................................................

>P. andrewsi-S.ATAATAACCC GGCGAATCGC ACGGCTTGTC CGGCGATGGA CCATTCAAGT
 #251          ..................................................

>P. andrewsi-S.TTCTGACCTA TCAGCTATGG ACGGTAGGGT ATTGGCCTAC CGTGGCGTTG
 #301          ..................................................

>P. andrewsi-S.ACGGGTAACG GGGAATTAGG GTTCGATTCC GGAGAGGGAG CCTGAGAAAC
 #351          ..................................................

>P. andrewsi-S.GACTACCACA TCTAAGGAAG GCAACAGGCG CGCAAATTAC CCAATCCTGA
 #401          ..................................................

>P. andrewsi-S.TACAGGGAGG TAGTGACAAG AAATAACAAT ACAGGGCAAT TCTGTCTTGT
 #451          ..................................................

>P. andrewsi-S.AATTGGAATG AGTAGATTTT AAATCTCTTT ACGAGTATCA ATTGGAGGGC
 #501          ..................................................

>P. andrewsi-S.AAGTCTGGTG CCAGCAGCCG CGGTAATTCC AGCTCCAATA GCGTATATTA
 #551          ..................................................

>P. andrewsi-S.AAGTTGTTGC GGTTAAAAAG CTCGTAGTTG GATTTCTGCC TTGGGCGACC
>SSU3F-Text                            AGTTG GATTTCTGCC TTGGGCG
 #601          ..................................................

>P. andrewsi-S.GGTCCACCTT TCCTACGGGT TAGGTTGGTA CCAGGTTTGA CCTTGGCTTT
 #651          ..................................................

>P. andrewsi-S.TTCTTGGGAT TCGTGCTCAC GCACTTAACT GTGCGCTGAC CGTGTTCCAA
 #701          ..................................................

>P. andrewsi-S.GACTTTTACT TTGAGGAAAT TAGAGTGTTT CAAGCAGGCT TATGCCGTGA

 #751          ..................................................
>P. andrewsi-S.ATACATTAGC ATGGAATAAT AGGATATGAC TTTGGTCATA TTTTGTTGGT
 #801          ..................................................

>P. andrewsi-S.TTCTAGGACT GAAGTAATGA TTAATAGGGA CAGTCGGGGG CATTCGTATT
 #851          ..................................................

>P. andrewsi-S.TAACTGTCAG AGGTGAAATT CTTGGATTTG TTAAAGACGA ACTACTGCGA
 #901          ..................................................
```

FIG.18A

```
>P. andrewsi-S.AAGCATTTGC CAAGGATGTT TTCATTGATC AAGAACGAAA GTTAGGGGAT
 #951            ..................................................

>P. andrewsi-S.CGAAGACGAT CAGATACCGT CCTAGTCTTA ACCATAAACT ATGCCGACTA
 #1001           ..................................................

>P. andrewsi-S.GGGATTGGGA GTCGTTAATT TTAGACGCTC TCAGCACCTC GTGAGAAATC
 #1051           ..................................................

>P. andrewsi-S.AAAGTCTTTG GGTTCCGGGG GGAGTATGGT CGCAAGGCTG AAACTTAAAG
 #1101           ..................................................

>P. andrewsi-S.GAATTGACGG AAGGGCACCA CCAGGAGTGG AGCCTGCGGC TTAATTTGAT
 #1151           ..................................................

>P. andrewsi-S.TCAACACGGG AAAACTCACC AGGTCCAGAC ATAGGAAGGA TTGACAGATT
>SSU4F-Text                      ACC AGGTCCAGAC ATAGGAAGG
 #1201           ..................................................

>P. andrewsi-S.GATAGCTCTT TCTTGATTCT ATGGGTGGTG GTGCATGGCC GTTCTTAGTT
 #1251           ..................................................

>P. andrewsi-S.GGTGGAGTGA TTTGTCTGGT TAATTCCGTT AACGAACGAG ACCTTAACCT
 #1301           ..................................................

>P. andrewsi-S.GCTAAATAGT TGCGTGAAAT CTTGTATTTC ACCGCTACTT CTTAGAGGGA
 #1351           ..................................................

>P. andrewsi-S.CTTTGTGTGT TTAACACAAG GAAGCTTGAG GCAATAACAG GTCTGTGATG
 #1401           ..................................................

>P. andrewsi-S.CCCTTAGATG TTCTGGGCTG CACGCGCGCT ACACTGACAC GATCAACGAG
 #1451           ..................................................

>P. andrewsi-S.TATTTCCTTG CCCGGTAGGG TTAGGGTAAT CTTTTGAAAT CGTGTCGTGC
 #1501           ..................................................

>P. andrewsi-S.TAGGGATAGA CGATTGCAAT TATTCGTCTT CAACGAGGAA TTCCTAGTAA
 #1551           ..................................................

>P. andrewsi-S.ATGCAAGTCA TCAGCTTGCG TTGATTACGT CCCTGCCCTT TGTACACACC
 #1601           ..................................................

>P. andrewsi-S.GCCCGTCGCT CCTACCGATT GAGTGATCCG GTGAGCTGTC CGGACTGCGA
 #1651           ..................................................

>P. andrewsi-S.TTAGTTCAGT TTCTGTTCTT TTCGCGGGAA GTTCTGCAAA CCTTATCACT
 #1701           ..................................................

>P. andrewsi-S.TAGAGGAAGG AGAAGTCGTA ACAAGGTTTC CGTAGGTGAA CCTGCAGAAG
#1751
   .........................
>P. andrewsi-S.GATCATTC
```

FIG. 18B

ACACCGATTC ATTCTCTGAG AAACCAGCGG TCTCTGTAAA AGGAGATGGG
#1
ATCTCCGCTT TGTTTAGATC CCCACACCTG ACCGCTTTAA CGGGCCGGGT
#51
AGGTGCATAA CTTCTATGAA CCAATTGTAC TAGTCTAAAG TATCCAATAT
#101
CCTTTTGGAT TTTGGTATTT CAAAACGAAA TTCCAAACTC TCAACGATGG
#151
ATGCCTCGGC TCGAGAATCG ATGAAGGACG CAGCGAAGTG CGATAAGCAC
#201
TGCGATTTGC AGAATTCCGT GAACCAGTAG AAATCTCAAC GCATACTGCA
#251
CAAAGGGGAT TTATCCTCTT TGTACATACA TATCAGTGTC GCTCTTCTTC
#301
CCGATACAAA CATTTTGTTG ATTTACAATC AACATTATGC TTTGTATCCC
#351
GCTTGGATTC CTTTATTGGG ATCCGCTGTG TGCGCTTGCT GACACAGGCG
#401
CATTAATTTG CAAGGCTATA ATACTACTGT ACTGTAGCCC CTTCGCAAGA
#451
AGGACTGCGC TAGTGAGTAT CTTTGGATGC TCGCGAACTC GACTGTGTTG
#501
TGGTTGATTC CGTGTTCCTC GATCACGCGA TTCATCGCTT CAACGCATTA
#551
TGTCAAATTT GATGAATGCA GAGAGTTGTT TATGAATTAC GCGATCGCTT
#601
TGGTCTCAGA ATCGTTACTA TAGCACGCTT GTCGGTTTGC AACCTGGCAA
#651
TATGTCATCA TT
#701

FIG. 19

		Primers to claim							
Perkinsus species	PCR	Name	Forward Primer (5'-3')	Position[1]	Name	Reverse Primer (5'-3')	Position[1]	Amplicon Size (bp)	Publication
Perkinsus marinus	Species specific	300F	CAC TTG TAT TGT GAA GCA CCC	60-80	300R	TTG GTG ACA TCT CCA AAT GAC	346-366	307	Marsh et al. J. Parasitol. 1995 81(4):577-83. J. Parasitol. 1999 85(4):650-6.
Perkinsus atlanticus	Species specific	PA690F	ATG CTA TGG TTG GTT GCG GAC C	262-283	PA690R	GTA GCA AGC CGT AGA ACA GC	933-952	691	Robledo et al. J. Parasitol. 2000 86(5):972-8
Perkinsus andrewsi[2]	Species specific	NTS7	AAG TCG AAT TGG AGG CGT GGT GAC	447-470	NTS6	ATT GTG TAA CCA CCC CAG GC	717-736	290	Coss et al. J. Euk. Microbiol. (In Press)
Perkinsus marinus	Generic	PER1	TAG TAC CCG CTC AT(TC) GTG G	827-845	PER2	TGC AAT GCT TGC GAG CT	1123-1139	313	Coss et al. J. Parasitol. (Submitted)
Perkinsus atlanticus	Generic	PER1	TAG TAC CCG CTC ATT GTG G	833-851	PER2	TGC AAT GCT TGC GAG CT	1121-1137	305	Coss et al. J. Parasitol. (Submitted)
Perkinsus andrewsi	Generic	PER1	TAG TAC CCG CTC ATT GTG G	1221-1239	PER2	TGC AAT GCT TGC GAG CT	1523-1539	319	Coss et al. J. Parasitol. (Submitted)

[1]Relative to the NTS sequence

[2]*Perkinsus* sp. (*Macoma balthica*)

FIG. 20

		Primers to claim						
Perkinsus species	PCR	Name	Forward Primer (5'-3')	Position	Name	Forward Primer (5'-3')	Position[1]	Publication
Perkinsus andrewsi	Sequencing	SSU3F	AGT TGG ATT TCT GCC TTG GGC G	626-647	SSU4F	ACC AGG TCC AGA CAT AGG AAG G	1218-1239	Coss et al. J. Euk. Microbiol. (In Press)

FIG. 21